CHAPTER 7
GLOSSARY

CHAPTER 7.0
Glossary

Acid Rock Drainage	Low pH drainage (pH of 2.0 to 4.5) resulting from the oxidation of sulfides.
Acre-feet	The volume of water required to cover 1 acre to a depth of 1 foot; equivalent to a volume of 43,560 cubic feet.
Aggrade	To raise the level of a stream bed by depositing sediment.
Allotment	A unit of land suitable and available for livestock grazing that is managed as one grazing unit.
Alluvial	Pertaining to material or processes associated with transportation or deposition of soil and rock by flowing water (e.g., streams and rivers).
Alluvium	Unconsolidated or poorly consolidated gravel, sands, and clays deposited by streams and rivers on riverbeds, floodplains, and alluvial fans.
Ambient	The environment as it exists at the point of measurement and against which changes or impacts are measured.
Ambient Noise	Total, all-encompassing noise associated with a given environment and time.
amsl	Above mean sea level.
Analyte	A substance whose chemical composition is to be determined by chemical analysis.
Animal Unit Months	Grazing of a cow/calf, sheep/lamb, or other animal pair for 1 month.
Anisotrophic	Variation in hydraulic properties according to direction of flow.
Anticline	A fold in the strata that is convex upward with the older rocks toward the center of the curvature.
Antiform	An anticlinal-type structure in which the stratigraphic sequence is not known.
Aquifer	A body of rock that is sufficiently permeable to conduct ground water and to yield economically significant quantities of water to wells and springs.
Aquitard	A low-permeability unit that can store ground water and transmit it slowly from one aquifer to another.
Argillic Alteration	Alteration to clay minerals; particularly an alteration of plagioclase to kaolinite, amphiboles and plagioclase to montmorillonite.
Argillite	A fine-grained rock derived from the weak metamorphism of a mudstone or shale.
Arsenopyrite	An iron arsenic sulfide mineral (FeAsS).
Artesian	Refers to ground water under sufficient hydrostatic head to rise above the aquifer in which it is contained.

Artifact	Any object showing human workmanship or modification, especially from a prehistoric or historic culture.
Background Noise	Noise from all sources other than that from a particular source of interest (e.g., other than mining noise if mining noise were being investigated).
Barren Solution	In a metallurgical process, the solution left after the value has been removed.
Basalt	An extrusive igneous rock (lava flows) composed primarily of calcic plagioclase and pryoxene.
Bedrock	Any solid rock exposed at the surface or overlain by unconsolidated material.
BLM Sensitive Species	Previous Category 2 (C2) candidate species.
Breccia	A rock composed of coarse-grained angular broken rock fragments held together by a mineral cement or fine-grain matrix.
Calcareous	Containing calcium carbonate.
Cambrian	The span of time between 570 and 505 million years ago.
Capping Material	Oxide, benign, and/or amended waste rock or other suitable material.
Carbonate	A mineral compound containing CO_3 (e.g., calcite); also used to refer to sediments formed of carbonates of calcium, magnesium, and iron (e.g., limestone and dolomite).
Carbon-in-Leach	The process where activated carbon capable of adsorbing gold is introduced into an ore-leaching circuit as opposed to passing the leach solution through a separate carbon adsorption circuit.
Cenozoic	The span of time between 66 million years ago to the present.
Chalcocite	A copper sulfide mineral (Cu_2S).
Chalcopyrite	A copper iron sulfide mineral ($CuFeS_2$).
Chert	A hard, dense microcrystalline rock composed of interlocking grains of quartz or amorphous silica.
Chloritic Alteration	Replacement, conversion, or introduction of the mineral chlorite.
Clastic	A textural term for sedimentary rock formed from particles (clasts) that were mechanically transported.
Code of Federal Regulations	The compilation of federal regulations adopted by federal agencies through a rule-making process.
Colluvium	Soil and rock fragment material accumulated by gravitational slope movement or sheet wash processes.
Cone of Depression	The depression of heads around a pumping well caused by the withdrawal of water.
Confining Bed	A layer of rock having very low hydraulic conductivity that hampers the movement of water into and out of an aquifer.

Conglomerate	A sedimentary rock, a significant fraction of which is composed of rounded pebbles and boulders.
Cretaceous	The span of time between 144 and 66 million years ago.
Critical Habitat	Habitat that is present in minimum amounts and is the determining factor in the potential for population maintenance and growth.
Cumulative Effects	The combined environmental impacts that accrue over time and space from a series of similar or related individual actions, contaminants, or projects. Although each action may seem to have a negligible impact, the combined effect can be significant. Included are activities of the past, present, and reasonably foreseeable future; synonymous with cumulative impacts.
Cyclone	A water process separating coarser and finer ground materials.
dB	Decibel. A unit used in expressing ratios of electric or acoustic power; the relative loudness of sound.
dBA	A-weighting. The most commonly used frequency weighting measure; simulates human sound perception and correlates well with human perception of the annoying aspects of noise.
Debris Flow	Rapid downslope movement of earth material often involving saturated, unconsolidated material that has become unstable because of torrential rainfall.
Dendritic	Irregularly branching in all directions with the tributaries joining the main stream at all angles.
Devonian	The span of time between 408 and 360 million years ago.
Dike	A tabular body of igneous rock that cuts across the structure of adjacent rocks or cuts massive rocks.
Direct Impacts	Impacts that are caused by the action and occur at the same time and place (40 Code of Federal Regulations 1508.7); synonymous with direct effects.
Discharge	The volume of water flowing past a point per unit time, commonly expressed as cubic feet per second, gallons per minute, or million gallons per day.
Disturbed Area	An area where natural vegetation and soils have been removed.
Dolomite	A mineral, calcium magnesium carbonate ($CaMg(CO_3)_2$), or a rock composed largely of dolomite.
Dolomitization	The process that transforms limestone partly or wholly to dolomite by replacing the original calcium carbonate (calcite) with calcium magnesium carbonate (dolomite).
Drainage	The natural channel through which water flows some time of the year; natural and artificial means for affecting discharge of water as by a system of surface and subsurface passages.
Drawdown	The lowering of the water level in a well as a result of withdrawal; the reduction in head at a point caused by the withdrawal of water from an aquifer.

Edaphic	Pertaining to soils.
Effervescence	Reaction of a soil mass to the addition of 0.1N hydrochloric acid, indicating the concentration of free calcium in the soil.
Electrum	A natural alloy of gold and silver.
Endangered Species	Any species in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.
Ephemeral Stream	A stream or portion of a stream that flows briefly in direct response to precipitation in the immediate vicinity and whose channel is at all times above the water table.
Erosion	The wearing away of soil and rock by weathering, mass wasting, and the action of streams, glaciers, waves, wind, and underground water.
Evapotranspiration	The portion of precipitation returned to the air through evaporation and plant transpiration.
Exploration	The search for economic deposits of minerals, ore, and other materials through practices of geology, geochemistry, geophysics, drilling, and/or mapping.
Fan	Rock and soil material deposited at the toe of a slope by the action of fluvial and gravitational forces.
Fault	A fracture in rock units along which there has been displacement.
Flocculant	A reagent added to water to aggregate minute suspended particles so that they may precipitate out of suspension.
Floodplain	That portion of a river valley, adjacent to the channel, that is built of sediments deposited during the present regimen of the stream and that is covered with water when the river overflows its banks at flood stages.
Flux	A substance that promotes the fusing of minerals or metals.
Forage	Vegetation used for food by wildlife, particularly big game wildlife, and domestic livestock.
Forb	Any herbaceous plant other than a grass, especially one growing in a field or meadow.
Fugitive Dust	Dust particles suspended randomly in the air from road travel, excavation, and rock loading operations.
g	Force of gravity.
Galena	A lead sulfide mineral (PbS).
Game Species	Animals commonly hunted for food or sport.
Gangue	The nonvaluable minerals associated in ore.

Geochemistry	The study of the distribution and amounts of the chemical elements in minerals, ores, rocks, soils, water, and the atmosphere, and their circulation in nature on the basis of the properties of their atoms and ions.
Geotechnical	A branch of engineering concerned with the engineering design aspects of slope stability, settlement, earth pressures, bearing capacity, seepage control, and erosion.
Grade	A slope stated in feet per mile or as feet per feet (percent); the content of precious metals per volume of rock (ounces per ton).
Granodiorite	A plutonic rock composed of quartz with feldspar and mafic minerals.
Greenstone	A rock derived from the alteration or metamorphosis of basic igneous rocks.
Ground Water Recovery	An increase in ground water levels such that the ground water elevations rise above initial baseline ground water elevations. Used to refer to an increase in water levels following drawdown.
Ground Water Table	The surface between the zone of saturation and the zone of aeration; that surface of a body of unconfined ground water at which the pressure is equal to that of the atmosphere.
Hardpan	A hardened or cemented soil horizon or layer.
Heap Leaching	The process of recovering gold from low grade ores by leaching ore that has been mined and placed on a specially prepared pad. A chemical solution is applied through low volume emitters, and the metal-bearing leachate solution percolates and is collected.
Hematite	An iron oxide mineral (Fe_20_3).
Holocene	The span of time between 10,000 years ago and the present.
Host Rock	A rock body or wall rock that encloses mineralization or ore rock.
Hydraulic Conductivity	The capacity of a rock to transmit water. It is expressed as the volume of water at the existing kinematic viscosity that will move in unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow.
Hydraulic Gradient	Change in head per unit of distance measured in the direction of flow.
Hydraulic Head	The height of the free surface of a body of water above a given subsurface point.
Hydrostratigraphic Unit	Grouping of stratified, mainly sedimentary rocks that have similar hydrologic properties.
Hydrothermal Fluids	Naturally occurring fluids (i.e., geothermal waters) at high temperatures.
Hypogene	Mineral or ore deposits formed by generally ascending waters.
Igneous	Rock or mineral that has solidified from molten or partly molten magma; processes relating to or resulting from the formation of such rocks.

Impact	A modification in the status of the environment brought about by the proposed action or an alternative.
Impoundment	The accumulation of any form of water in a reservoir or other storage area.
Indirect Impacts	Impacts that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable (40 Code of Federal Regulations 1508.8); synonymous with indirect effects.
Infiltration	The movement of water or some other liquid into the soil or rock through pores or other openings.
Infrastructure	The basic framework or underlying foundation of a community or project, including road networks, electric and gas distribution, water and sanitation services, and facilities.
Interburden	Non-ore grade material interlayed with ore or located within or horizontally adjacent to the ore such that it must be removed in the process of extracting ore grade material.
Intermittent Stream	A stream that flows only part of the time or during part of the year.
Intrusive	An igneous rock that solidified below the surface.
Irretrievable	Applies primarily to the lost production of renewable natural resources during the life of the project.
Irreversible	Applies primarily to the use of nonrenewable resources, such as minerals, cultural resources, wetlands, or to those factors that are renewable only over long time spans, such as soil productivity. Irreversible also includes loss of future options.
Isotrophic	Applies to hydraulic properties that are the same in all directions; uniform.
Jurassic	The span of time between 208 and 144 million years ago.
Jurisdictional Wetland	A wetland area identified and delineated by specific technical criteria, field indicators, and other information for purposes of public agency jurisdiction. The public agencies that administer jurisdictional wetlands are the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Natural Resources Conservation Service.
Key Observation Point	An observer position on a travel route used to determine visible area.
Kinetic Testing	A method of testing rock materials to simulate natural weathering; used to test the acid-generating potential of rock.
L_d	Day average sound level. L_{eq} for the daytime period from 7:00 a.m. to 10:00 p.m.
L_{dn}	Day-night average sound level. L_{eq} for a 24-hour, midnight to midnight period with 10 dBA added to the sound levels from 10:00 p.m. to 7:00 a.m.
Leachate	A solution obtained by leaching as in downward percolation of water through soil or waste.

L_{eq}	Equivalent continuous sound level. Level of steady state sound that, in a specific time period, has an equal amount of sound energy as the actual time-varying sound.
Limestone	A sedimentary rock composed principally of calcite.
Limonite	A term for naturally occurring hydrous ferric oxides.
Liquifaction	The sudden large decrease of shearing resistance of a cohesionless soil caused by a collapse of the structure by a shock (such as an earthquake) and associated with an increase of pore pressure.
Lithic Scatter (Archaeology)	A discrete grouping of flakes of stone created as a byproduct in the tool making process. Often includes flakes used as tools as well as formal stone tools, such as projectile points, knives, or scrapers.
Lithology	The description of the physical character of a rock, including mineral composition, grain size, color, and other physical characteristics.
L_{max}	Maximum sound level. The greatest sound level measured on a sound level meter during a designated time interval or event, using “fast” time averaging on the meter.
L_n	Night average sound level. L_{eq} for the nighttime period from midnight to 7:00 a.m. and from 10:00 p.m. to midnight.
Losing Stream	A stream or reach of stream that contributes water to the saturated zone. Its channel lies above the water table.
Maximum Credible Earthquake	The largest conceivable earthquake that could occur in an area.
Merrill-Crowe	The process used to recover gold from leachate solution. The solution is de-aerated, the pH and cyanide concentrations are increased, and the gold is chemically precipitated using powdered zinc.
Mesozoic	The span of time between 245 and 66 million years ago.
Mine Rock	Non-ore rock that is extracted to gain access to ore. It contains no ore metals, or contains ore metals at levels below the economic cutoff value, and must be removed to recover the ore; synonymous with waste rock.
Mineralization	The process by which a valuable mineral or minerals are introduced into a rock.
Mississippian	The span of time between 360 and 320 million years ago.
Mitigate, Mitigation	To cause to become less severe or harmful; actions to avoid, minimize, rectify, reduce or eliminate, and compensate for impacts to environmental resources.
Molybdenite	A molybdenum sulfide mineral (MoS_2).
Monitor	To systematically and repeatedly watch, observe, or measure environmental conditions in order to track changes.
National Environmental	The National Environmental Policy Act (NEPA) of 1969; the national charter

Policy Act	for protecting the environment. NEPA establishes policy, sets goals, and provides means for carrying out the policy. Regulations from 40 Code of Federal Regulations 1500-1508 implement the act.
National Pollutant Discharge Elimination System	A part of the Clean Water Act that requires point source dischargers to obtain permits. These permits are referred to as NPDES permits and are administered by the U.S. Environmental Protection Agency.
National Register of Historic Places	A list, maintained by the National Park Service, of areas that have been designated as being of historical significance.
Native Species	Plants that originated in the area in which they are found, i.e., they naturally occur in that area.
Nevada Administrative Code	The text of the regulations implementing the laws passed by the Nevada legislature.
Nevada Revised Statutes	The text of laws passed by the Nevada legislature.
Noise	Unwanted sound; one that interferes with one's hearing of something; a sound that lacks agreeable musical quality or is noticeably unpleasant.
Normal Fault	A dip-slip fault in which the block above the fault has moved downward relative to the block below.
Ordovician	The span of time between 505 and 438 million years ago.
Ore	A deposit of rock from which a valuable mineral or minerals can be economically extracted.
Orogeny	The process of forming mountains.
Overburden	Material that must be removed to allow access to an orebody, particularly in a surface mining operation.
Oxidation	The process of combining with oxygen to form a compound such as an oxide. The term is also used more generally to include any reaction in which an atom loses electrons.
Oxide Ore	Ore exposed by erosion and leached of many of its valuable materials.
Paleozoic	The span of time between approximately 570 and 245 million years ago.
Parent Material	Unconsolidated organic and inorganic mineral material in which soil forms.
Particulate(s)	Minute, separate particles, such as dust or other air pollutants.
Peak Flow	The greatest flow attained during winter snowmelt or during a large precipitation event.
Pediment	A gently inclined rock surface, generally veneered with fluvial gravels, that forms a ramp up to the front of a mountain range in an arid region.
Pennsylvanian	The span of time between 320 and 286 million years ago.
Perched Water	Unconfined ground water separated from the main body of ground water by unsaturated rock.

Perennial Stream	A stream or reach of a stream that flows throughout the year.
Permeable	The property or capacity of a porous rock, sediment, or soil to transmit a liquid.
Permian	The span of time between 286 and 245 million years ago.
pH	The measure of the acidity or basicity of a solution.
Phreatophyte	A plant that obtains its water from the saturated zone and generally has a deep root system.
Piedmont	A major landform type located between mountains and basin floors.
Piezometer	A nonpumping well that is used to measure the elevation of a water table or a potentiometric surface.
Plan of Operations	A documented plan that operators must submit to the BLM in response to 43 Code of Federal Regulations 3809.1-4. The plan must include the name and address of the operator; location of the proposed area of operation; and information sufficient to describe the type of operation proposed, the type of roads, the means of transportation to be used, the period when the proposal will take place, and measures to be taken to meet the requirements for environmental protection.
Playa	The flat floor of a closed basin in an arid region; it may be occupied by an intermittent lake that evaporates.
PM_{10}	Particulate matter less than 10 microns in aerodynamic diameter.
Porosity	The voids or openings in a rock. Porosity may be expressed quantitatively as the ratio of the volume of openings in a rock to the total volume of the rock.
Potentiometric Surface	A surface that represents the total head in an aquifer; that is, it represents the height above a datum plane at which the water level stands in tightly cased wells that penetrate the aquifer.
Precambrian	The span of time older than 570 million years.
Pregnant Solution	Solution derived from the leaching process that contains dissolved metals.
Project Alternatives	Alternatives to the proposed action developed through the NEPA process.
Pyrite	An iron sulfide mineral (FeS_2).
Pyrrhotite	An iron sulfide mineral ($Fe_{1-x}S$).
Quaternary	The span of time between 1.6 million years ago to the present.
Radiolarian	Marine protozoans of the order radiolavia. Note: geological deposits may be made up largely of radiolavian skeletons.
Raptor	A bird of prey (e.g., eagle, hawk, falcon, and owl).
Recontour	Act of restoring the natural topographic contours using reclamation measures, particularly in reference to roads.

Recovery (Ground Water)	An increase in ground water levels such that the ground water elevations rise above initial baseline ground water elevations. Used to refer to an increase in water levels following drawdown.
Re-emergence	Surface water that seeps into the ground upstream and re-appears.
Refractory Ore	Ore that is difficult to treat for recovery of valuable substances.
Reserves	Identified resources of mineral-bearing rock from which the mineral can be extracted profitably with existing technology and under present economic conditions.
Residuum	Soil material formed by rock weathering in place.
Resources (Geology)	Reserves plus all other mineral deposits that may eventually become available—either known deposits that are not yet recoverable at present or unknown deposits that may be inferred to exist but have not yet been discovered.
Right-of-Way	Strip of land or corridor over which a power line, access road, or maintenance road would pass.
Riparian	Situated on or pertaining to the bank of a river, stream, or other body of water. Riparian is normally used to refer to plants of all types that grow along streams, rivers, or at spring and seep sites.
Riprap	Large fragments of broken rock thrown together irregularly or fitted together to prevent erosion by waves or currents in order to preserve a surface, slope, or underlying structure.
Run-of-Mine Ore	Ore that is taken from a mine or pit directly to a mill for processing.
Runoff	That part of precipitation that appears in surface streams; precipitation that is not retained on the site where it falls and is not absorbed by the soil.
Scarify	To break up and loosen the surface of topsoil.
Sediment	Material suspended in or settling to the bottom of a liquid. Sediment input comes from natural sources, such as soil erosion, rock weathering, construction activities, or anthropogenic sources, such as forest or agricultural practices.
Sediment Load	The amount of sediment (sand, silt, and fine particles) carried by a stream or river.
Seismicity	The likelihood of an area being subject to earthquakes; the phenomenon of earth movements.
Seismogenic	Fault or other geologic structure capable of generating earthquakes.
Sensitive Receptors (Noise)	Activities or land uses that are more susceptible than others to noise interference.
Shale	A very fine-grained sedimentary rock composed of clay and silt that splits along closely spaced bedding surfaces.

Siderite	An iron carbonate mineral ($FeCO_3$).
Significant	A NEPA term used to determine or classify impacts; requires consideration of both context and intensity. Context means that the significance of an action must be analyzed in several contexts, such as society as a whole and the affected region, interests, and locality. Intensity refers to the severity of impacts (40 Code of Federal Regulations 1508.27).
Silicification	The process by which the rock composition changes by adding silica.
Skarn	An ore deposit formed at high temperatures with the replacement of pre-existing rocks particularly carbonate-rich sediments.
Soil Horizon	A layer of soil material approximately parallel to the land surface differing from adjacent genetically related layers in physical, chemical, and biological properties.
Soil Pedon	A three-dimensional body of soil with lateral dimensions large enough to permit the study of horizon shapes and relations.
Soil Profile	A vertical section of the soil through all its horizons and extending into the parent material or to a depth of 60 inches.
Sound Pressure Level	A measure of the change in atmospheric pressure induced by sound; depends not only on the power of the sound source, but also on the distance from the source and on the acoustical characteristics of the space surrounding the source. In decibels, 20 times the logarithm (base 10) of the ratio of a sound pressure to the reference sound pressure of 20 micropascals.
Species	A group of individuals of common ancestry that closely resemble each other structurally and physiologically, and in nature interbreed producing fertile offspring.
Specific Storage	The amount of water per unit volume of a saturated formation that is stored or expelled from storage owing to compressibility and pore water per unit change in head.
Sphalerite	An zinc iron sulfide mineral (Zn,Fe)S.
Stock (geology)	An intrusive igneous rock mass with less than 100 square kilometers in surface expansion.
Storativity	The volume of water that a permeable unit will absorb or expel from storage per unit of surface area per unit change of head.
Stratification	The layered structure of sedimentary rocks.
Stratigraphy	Form, arrangement, geographic distribution, chronological succession, classification, and relationships of rock strata.
Subsidence	Sinking or downward settling of the earth's surface.
Sulfide Ore	Ore containing sulfide minerals.
Tailings	The residual rock and mineral material remaining after the ore is removed by a milling and extraction process.

Talus	A deposit of large angular fragments of physically weathered bedrock, usually at the foot of a steep slope.
Tertiary	The span of time between 65 and 3 to 2 million years ago.
Threatened Species	Any species of plant or animal that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.
Thrust Fault	A reverse fault in which the dip of the fault plane is relatively shallow.
Total Dissolved Solids	The total amount of dissolved material, organic or inorganic, contained in a sample of water.
Total Suspended Solids	The amount of undissolved particles suspended in a sample of water.
Transitional Material	Partially oxidized material.
Transmissivity	The rate at which water of the prevailing kinematic viscosity is transmitted through a unit width of an aquifer under a unit hydraulic gradient; it equals the hydraulic conductivity multiplied by the aquifer thickness.
Triassic	The span of time between 245 and 208 million years ago.
Tuff	A compacted deposit of volcanic ash and dust that may contain up to 50 percent sediments, such as sand or clay.
Unconformity	A surface of erosion that separates younger strata from older rocks.
Unsaturated Zone	The portion of soil and rock between ground surface and water table where the pore space is not completely filled with water.
Uplift	A structurally high area in the earth's crust produced by upthrusting rocks.
Visual Resource	The composite of basic terrain, geologic features, water features, vegetation patterns, and land use effects that typify a land unit and influence the visual appeal the unit may have for viewers.
Visual Resource Management Classes	A classification of landscapes according to the kinds of structures and changes that are acceptable to meet established visual goals (BLM).
Water Table	The level in the saturated zone at which the pressure is equal to the atmospheric pressure.
Waters of the United States	A jurisdictional term from Section 404 of the Clean Water Act referring to water bodies such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. The use, degradation, or destruction of these waters could affect interstate or foreign commerce.
Weir	An overflow structure built across an open channel, usually to measure the rate of water flow.
Wetlands	Areas that are inundated by surface or ground water with a frequency sufficient to support (and under normal circumstances do or would support) a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction.